

EGIL200 application example: Classic medium voltage circuit breaker - Static resistance measurement

Introduction

The requirements for testing a medium voltage circuit breaker vary by customer, meaning there are various test procedures in use by different companies. This application note outlines a common test for a medium voltage circuit breaker and can be used if no other test procedure is available.

Setup

Upon powering on the EGIL200, the user will discover that the instrument is already prepared to start a test. First select the type of breaker – In the example given – as indicated in the top row of Figure 1 – the breaker has three phases: a common mechanism, one break per phase and no pre-insertion resistors (no PIR).

Step 2 requires selection of the measurement type to perform (row 2 in Figure 1). Press the TEST tab to set up this new measurement. Now the operation type is STATIC and the mode is “Manual”, as this measurement will be made with an external micro-ohmmeter.

In this case insert measured results from measurement done by separate micro-ohmmeter, MOM2 or similar. Then, select STATIC and MANUAL entering the resistance values. For that purpose, push the pen symbol in the lower right corner. (Figure 1)

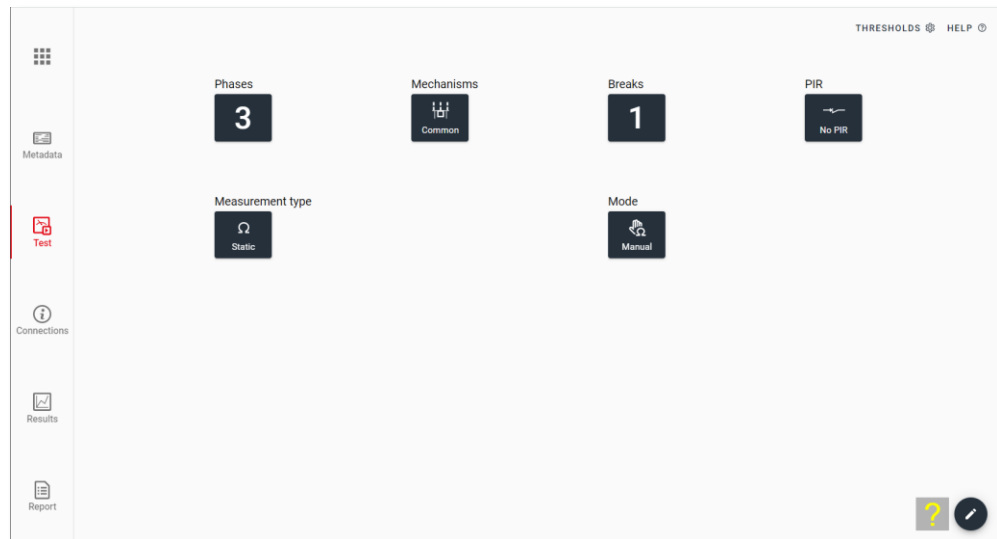


Figure 1: EGIL200 TEST display that appears after powering on the instrument

Measure using the selected micro-ohmmeter and fill in the values in the form. (Figure 2)

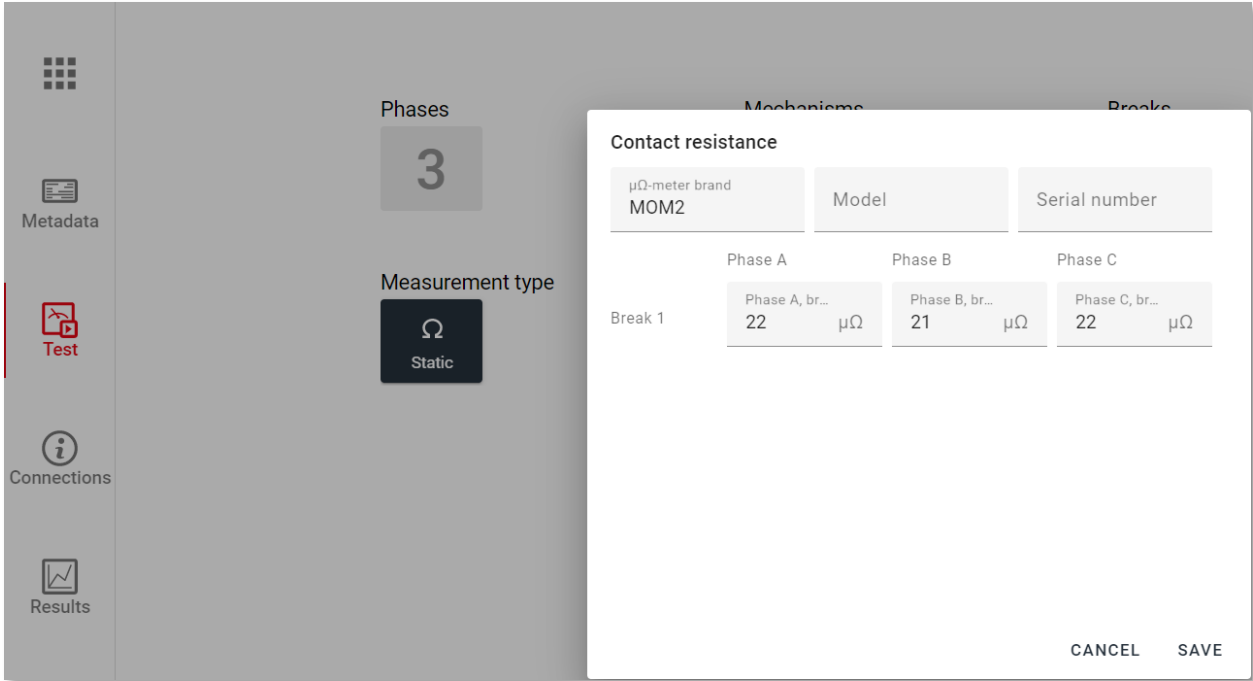


Figure 2: EGIL200 TEST display – static resistance measurement

When pressing SAVE, the RESULTS tab is displayed. The test list will look like this: (Figure 2)

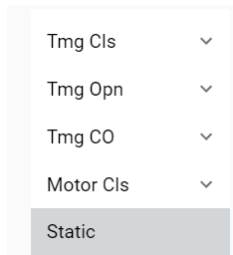


Figure 3: EGIL200 TEST display – static resistance measurement

Administration and report

Click the METADATA tab and fill in the identification field of the circuit breaker. Then click TEST INFO to fill in information about the test session. Then press the REPORT tab.

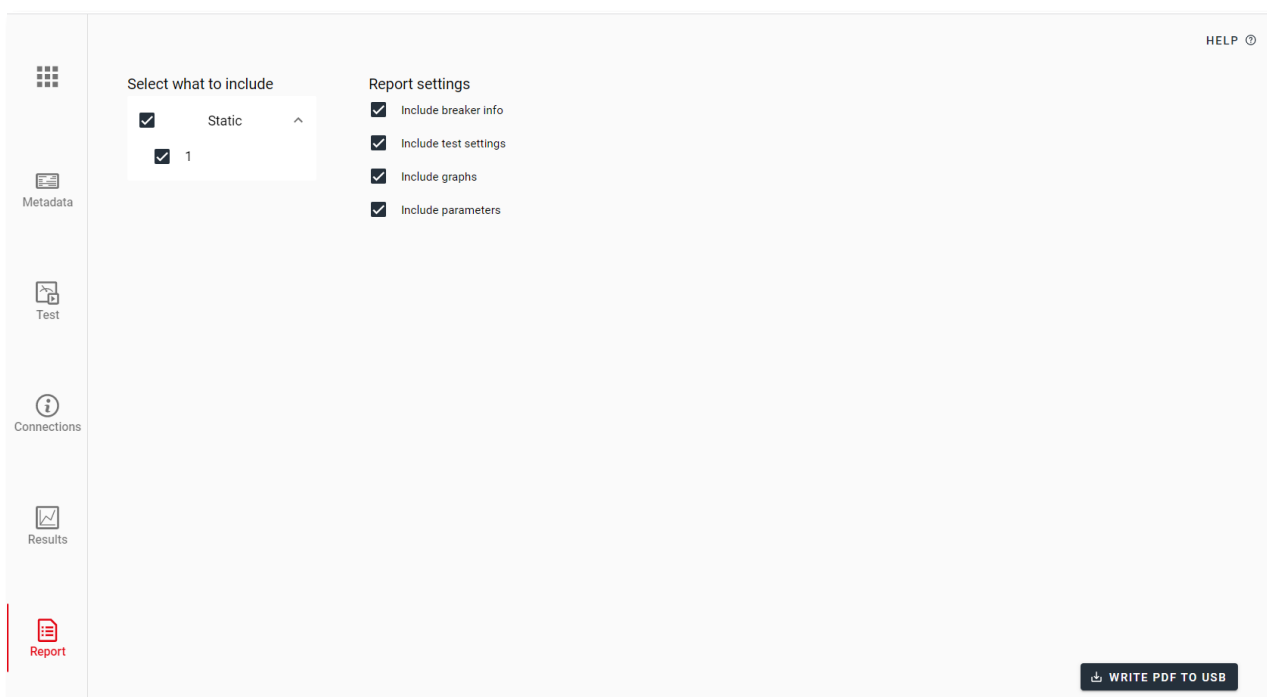


Figure 4: Generating a report

The REPORT tab automatically selects the last recording of each measurement type made. If you are pleased with this selection, insert a USB memory to the EGIL200 and press the button to write the pdf-report to the USB memory.

To continue testing another breaker, open the menu by clicking the top-most left icon and then NEW TEST.

If exactly the same type of breaker is tested, you can instead go to BREAKER and select “Clone CB”.

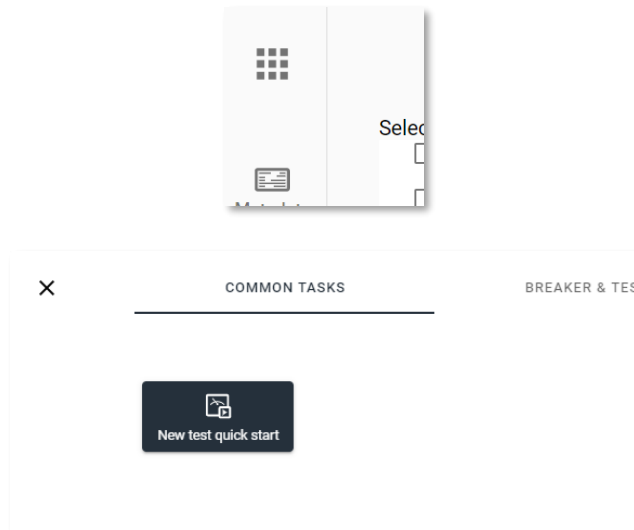


Figure 5: Continuing testing on a new breaker